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Friday, August 11, 2006

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From: Mary Jane Ruhl
Location: Biotech-Chem Library
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Phone: 571-272-2524

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Search Notes

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Mary Jane Ruhl
Technical Information Specialist
STIC
Remsen 1-A-61
Ext. 22524

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=> d que stat l18
L7          31379 SEA FILE=HCAPLUS ABB=ON  MICROARRAY TECHNOLOGY+ALL
L8              7 SEA FILE=HCAPLUS ABB=ON  L7 AND ?SUBARRAY?
L9            242 SEA FILE=HCAPLUS ABB=ON  L7 AND (?OPTICAL?(W)?DETECT? OR
                  ?MACHINE?(W)?READ?)
L10           248 SEA FILE=HCAPLUS ABB=ON  L8 OR L9
L11            75 SEA FILE=HCAPLUS ABB=ON  L10 AND (?PROBE? OR ?HAPTEN?)
L12            49 SEA FILE=HCAPLUS ABB=ON  L11 AND (?FLUORESC? OR ?ILLUMIN?)
L13             1 SEA FILE=HCAPLUS ABB=ON  L12 AND ?VISUAL?(W)?ALIGN?
L14            35 SEA FILE=HCAPLUS ABB=ON  L12 AND ?METHOD?
L15            35 SEA FILE=HCAPLUS ABB=ON  L13 OR L14
L18            26 SEA FILE=HCAPLUS ABB=ON  L15 AND (PRD<20020930 OR PD<20020930)

=> d ibib abs l18 1-26

L18 ANSWER 1 OF 26  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2004:587853  HCAPLUS
DOCUMENT NUMBER:          141:102746
TITLE:                    Arrays for characterization of biochemical reactions
                          and for the detection of biological samples by
                          removing the bound analytes from the chip for optical
                          measurements
INVENTOR(S):              Andresen, Peter; Spiecker, Heinrich; Nielsen, Tim
PATENT ASSIGNEE(S):       Andresen, Karin, Germany; Andresen, Volker; Andresen,
                          Martin; Andresen, Kerstin
SOURCE:                   Ger. Offen., 5 pp.
                          CODEN: GWXXBX
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     DE 10005844           A1    20040722    DE 2000-10005844        20000210 <--
PRIORITY APPLN. INFO.:                       DE 2000-10005844        20000210 <--
AB   The invention concerns the optical detection of a
     binding on a biochip and the determination of the strength of the binding
between
     a fluorescenct-labeled analyte and a probe on a chip
     by removing the analyte after binding from the chip and measuring the
     fluorescence of the analyte in an aqueous solution  The method
     is used for nucleic acid hybridization; sample nucleic acids are removed
     after hybridization by gradual heating; samples with lower binding
     strength are removed at lower temperature  Analytes can also be detached from
     the chip by changing the elec. field around the chip or by altering the pH
     or ionic strength of the aqueous medium.
REFERENCE COUNT:          4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 26  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2003:912726  HCAPLUS
DOCUMENT NUMBER:          139:361195
TITLE:                    System and method for detection of
                          biological warfare agents using the F1-ATPase
                          biomolecular motor
INVENTOR(S):              Chapsky, Lars; Frasch, Wayne D.; Chou, Chia Fu;
                          Zenhausern, Frederic; Goronkin, Herbert
PATENT ASSIGNEE(S):       Motorola, Inc., USA
SOURCE:                   U.S. Pat. Appl. Publ., 15 pp.
```

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003215844	A1	20031120	US 2003-365378	20030211 <--
US 6989235	B2	20060124		
PRIORITY APPLN. INFO.:			US 2002-357163P P	20020213 <--

AB An exemplary system and **method** of employing DNA hybridization for the detection of bio-agents is disclosed as comprising inter alia a biomol. rotary motor, a capture **probe** DNA fragment effectively attached to said biomol. motor, a target DNA fragment suitably adapted for hybridization with said capture **probe** DNA, a signal **probe** DNA fragment suitably adapted for hybridization with said target DNA and a **fluorescent** bead attached to said signal **probe** DNA. Disclosed features and specifications may be variously controlled, adapted or otherwise optionally modified to improve certain device fabrication parameters and/or performance metrics.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:571177 HCAPLUS
DOCUMENT NUMBER: 139:114064
TITLE: A microfabricated reaction chamber system for nucleic acid amplification
INVENTOR(S): Karlsen, Frank; Drese, Klaus; Sorensen, Olaf
PATENT ASSIGNEE(S): Norchip A/s, Norway; Allard, Susan Joyce
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003060157	A2	20030724	WO 2002-GB5945	20021230 <--
WO 2003060157	A3	20031224		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
GB 2383546	A1	20030702	GB 2001-31061	20011228
GB 2383546	B2	20060301		
AU 2002356341	A1	20030730	AU 2002-356341	20021230 <--
EP 1458473	A2	20040922	EP 2002-806348	20021230 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005089863	A1	20050428	US 2003-498827	20021230 <--
PRIORITY APPLN. INFO.:			GB 2001-31061 A	20011228 <--

GB 2002-25539 A 20021101
WO 2002-GB5945 W 20021230

AB The present invention relates to a microfabricated reaction chamber system and a **method** of fluid transport. The system may be used, for example, in a **method** of carrying out a nucleic acid sequence amplification and detection process on a nucleic acid sample. The microfabricated chamber system comprises an inlet port and/or an outlet port and a variable volume chamber in fluid communication with said port(s), wherein altering the volume of the variable volume chamber effects and/or restricts flow of a fluid sample to and/or from said port(s).

L18 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:510068 HCAPLUS
DOCUMENT NUMBER: 139:49481
TITLE: A microfabricated reaction chamber system.
INVENTOR(S): Karlsen, Frank; Sorensen, Olaf; Drese, Klaus
PATENT ASSIGNEE(S): Norchip A/S, Norway
SOURCE: Brit. UK Pat. Appl., 55 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2383546	A1	20030702	GB 2001-31061	20011228
GB 2383546	B2	20060301		
WO 2003060157	A2	20030724	WO 2002-GB5945	20021230 <--
WO 2003060157	A3	20031224		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002356341	A1	20030730	AU 2002-356341	20021230 <--
EP 1458473	A2	20040922	EP 2002-806348	20021230 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005089863	A1	20050428	US 2003-498827	20021230 <--

PRIORITY APPLN. INFO.: GB 2001-31061 A 20011228 <--
GB 2002-25539 A 20021101
WO 2002-GB5945 W 20021230

AB A microfabricated reaction chamber system comprises a variable-volume chamber 27, wherein altering the volume of the chamber affects the flow of a sample. The variable volume chamber may be in fluid communication with an inlet port and/or an outlet port. The variable volume chamber may also be a reaction chamber, and/or may be in fluid communication with a reaction chamber. The microfabricated reaction chamber system may comprise a substrate and an overlying flexible membrane, the variable volume chamber being defined by a recess in a surface of the substrate and the adjacent surface of the flexible membrane. The variable-volume chamber may comprise at least one wall formed from a flexible material, movement of said wall altering the volume of the chamber. The reaction chamber may have a temperature

control device therein. Also claimed is a **method** and apparatus for carrying out a nuclear acid sequence amplification and detection process on a nucleic acid sample. In use, the microfabricated reaction chamber system may be used for carrying out a process on a biol. fluid, a dairy product, environmental fluids and/or drinking water.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:282832 HCAPLUS
DOCUMENT NUMBER: 138:268027
TITLE: Device for electrophoresis, electrophoresis apparatus, electrophoresis **method**, and test substance detection **method**
INVENTOR(S): Ishimaru, Teruta; Itou, Chiho; Ikeda, Tadanobu; Akita, Takashi; Maehara, Osamu; Miyauchi, Haruko
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003029820	A1	20030410	WO 2002-JP10037	20020927 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004245103	A1	20041209	US 2004-490118	20040326 <--
PRIORITY APPLN. INFO.:			JP 2001-300107 A	20010928 <--
			JP 2001-300108 A	20010928 <--
			WO 2002-JP10037 W	20020927 <--

AB A device for electrophoresis is provided, which is a case possessing a closed space separated by an electrophoresis carrier (capillary array sheet) in its inside, and which is equipped with at least one liquid filling and discharge port communicable with the outside at the outer wall part of the separated closed space. Also provided are an electrophoresis **method** using this device, and a test substance detection **method** using this device. An electrophoresis apparatus is also provided, which possesses a mechanism for holding the electrophoretic carrier by a pair of electrodes, and a space capable of holding liquid between the electrophoretic carrier held and the electrodes. An electrophoresis **method** using this apparatus is also provided. Diagrams describing the device and apparatus assembly are given.
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:276691 HCAPLUS
DOCUMENT NUMBER: 138:268018

TITLE: Multilayered microfluidic apparatus for nucleic acid amplification using polymerase chain reaction
INVENTOR(S): Briscoe, Cynthia G.; Yu, Huinan; Grodzinski, Piotr; Marrero, Robert; Burdon, Jeremy W.; Huang, Rong-fong
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 17 pp., Cont.-in-part of U.S. Ser. No. 337,086.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6544734	B1	20030408	US 1999-460281	19991209 <--
US 6592696	B1	20030715	US 1999-235081	19990121 <--
US 6572830	B1	20030603	US 1999-337086	19990621 <--
CA 2393690	AA	20010614	CA 2000-2393690	20001211 <--
WO 2001041931	A2	20010614	WO 2000-US33499	20001211 <--
WO 2001041931	A3	20020103		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001020827	A5	20010618	AU 2001-20827	20001211 <--
EP 1237655	A2	20020911	EP 2000-984156	20001211 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003517591	T2	20030527	JP 2001-543266	20001211 <--
US 2003190608	A1	20031009	US 2001-861171	20010517 <--
US 6875619	B2	20050405		
US 2003129646	A1	20030710	US 2003-340057	20030110 <--
US 6984516	B2	20060110		

PRIORITY APPLN. INFO.:			
US 1998-103701P	P	19981009	<--
US 1999-235081	A2	19990121	<--
US 1999-337086	A2	19990621	<--
US 1999-438600	A2	19991112	<--
US 1999-458534	A	19991209	<--
US 1999-460281	A	19991209	<--
US 1999-460283	A	19991209	<--
US 1999-464490	A2	19991215	<--
US 1999-466325	A	19991217	<--
US 2000-492013	A2	20000126	<--
WO 2000-US33499	W	20001211	<--

AB A multilayered microfluidic DNA anal. system includes a cell lysis chamber, a DNA separation chamber, a DNA amplification chamber, and a DNA detection system. The multilayered microfluidic DNA anal. system is provided as a substantially monolithic structure formed from a plurality of green-sheet layers sintered together. The substantially monolithic structure has defined therein a means for heating the DNA amplification chamber and a means for cooling the DNA amplification chamber. The means for heating and means for cooling operate to cycle the temperature of the DNA amplification chamber as required for performing a DNA amplification process, such as PCR.

REFERENCE COUNT: 168 THERE ARE 168 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L18 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:24394 HCAPLUS
DOCUMENT NUMBER: 138:35677
TITLE: Time-resolved **fluorescent** detection **method** and apparatus for gene chip
INVENTOR(S): Lu, Zuhong; Zhu, Jijun; Zhang, Tian; Sun, Xiaoru; Chen, Yang
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 14 pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1339610	A	20020313	CN 2001-134009	20011009 <--

PRIORITY APPLN. INFO.: CN 2001-134009 20011009 <--

AB The invention relates to apparatus and **method** for DNA chip. The detection **method** comprises hybridizing **probe** immobilized on DNA chip with rare earth complex conjugate-labeled target mol., washing the chip, and detecting the hybridization signal by the time-resolved fluorimetry. The time-resolved fluorimeter consists of frame work, support platform, transmission gear, **optical detection** unit, and optical signal processing unit. The **optical detection** unit consists of detection light source, light-transmitting element, collimating lens, **fluorescent** lens, dichromic lens, pinhole, filter, and photoelec. receptor.

L18 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:849796 HCAPLUS
DOCUMENT NUMBER: 137:322303
TITLE: **Methods** for determining secondary modifications of molecules using arrays
INVENTOR(S): Gilmore, James; Daniel, Steven; Wiese, Rick
PATENT ASSIGNEE(S): Genometrix Genomics, Inc., USA
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002088324	A2	20021107	WO 2002-US14043	20020502 <--
WO 2002088324	A3	20030320		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,

	BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2446255		AA	20021107	CA 2002-2446255		20020502 <--
EP 1384068		A2	20040128	EP 2002-729125		20020502 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
JP 2005507491		T2	20050317	JP 2002-585607		20020502 <--
US 2004152130		A1	20040805	US 2003-476839		20031103 <--
PRIORITY APPLN. INFO.:				US 2001-288285P	P	20010502 <--
				WO 2002-US14043	W	20020502 <--

AB The invention provides a **method** for detecting a secondary modification of a target mol. using arrays. Use of microarrays allows for simultaneous anal. and detection of multiple secondary modification characteristics of a sample analyte, e.g., a post-translationally modified polypeptide. The invention provides a **method** for detecting a secondary modification of a target mol. comprising the following steps: (a) providing an array comprising a plurality of biosites, each biosite comprising a plurality of capture **probes** immobilized to the substrate; (b) providing a target mol.; (c) providing a detection **probe** capable of specifically binding to a capture **probe** -bound target mol., wherein the detection **probe** specifically binds to the target **probe**; and, (d) contacting the target mol. with the array and the detection **probe** with the target mol. and detecting which biosite comprises a bound target mol. and detection **probe**, thereby detecting a secondary modification of the target mol.

L18 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2002:794229 HCAPLUS
DOCUMENT NUMBER:	137:305712
TITLE:	Apparatus and microarray **methods** for parallel processing of microvolume liquid reactions
INVENTOR(S):	O'Keefe, Matthew; Foreman, Pamela K.
PATENT ASSIGNEE(S):	USA
SOURCE:	U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U.S. Pat. Appl. 2001 55,765. CODEN: USXXCO
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	2
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2002151040	A1	20021017	US 2001-935455		20010822 <--
US 2001055765	A1	20011227	US 2001-789899		20010220 <--
US 2005148066	A1	20050707	US 2005-54184		20050209 <--
PRIORITY APPLN. INFO.:			US 2000-229357P	P	20000218 <--
			US 2001-789899	A2	20010220 <--

AB Disclosed herein are apparatuses and **methods** for conducting multiple simultaneous micro-volume chemical and biochem. reactions in an array format. In one embodiment, the format comprises an array of microholes in a substrate. In the microhole sample chamber with the shape of a right circular cylinder or a right polygonal prism, the hydrophobic regions form an annular ring along the wall and define one or more annular non-hydrophobic rings there between for reagent attachment, such as oligonucleotide immobilization. Besides serving as an ordered array of sample chambers allowing the performance of multiple parallel reactions, the arrays can be used for reagent storage and transfer, library display, reagent synthesis, assembly of multiple identical reactions, dilution and desalting. Use of the arrays facilitates optical anal. of reactions, and

allows optical anal. to be conducted in real time. Included within the invention are kits comprising a microhole apparatus and a reaction component of the **method**(s) to be carried out in the apparatus The use of apparatuses are demonstrated in PCR-mediated anal. of CAG repeat length in the human hSK gene. In addition, gene expression anal. in the tissue(s) of human patients of interest using an RNeasy 96 BioRobot Kit is also described using prepared template mRNA (or total RNA). Microhole PCR with pre-affixed oligonucleotide primers and In-Situ **Fluorescent** Detection for Lambda phage are performed. Mol. haplotyping, such as genotyping a rare single base change in ATM gene introns, is also described.

L18 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:736774 HCAPLUS
DOCUMENT NUMBER: 137:258475
TITLE: Homogeneous assay of nucleic acid hybridization by means of multiple measurements under varied conditions
INVENTOR(S): Erikson, Glen H.; Daksis, Jasmine I.; Picard, Pierre
PATENT ASSIGNEE(S): Turks/Caicos I.
SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. 6,265,170.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002137056	A1	20020926	US 2001-911047	20010723 <--
US 6265170	B1	20010724	US 2000-490273	20000124 <--
US 6613524	B1	20030902	US 2001-998155	20011129 <--
US 2002123066	A1	20020905	US 2002-120092	20020410 <--
US 6982147	B2	20060103		
US 2003170659	A1	20030911	US 2002-189211	20020703 <--
CA 2454415	AA	20030206	CA 2002-2454415	20020715 <--
WO 2003010506	A2	20030206	WO 2002-IB2788	20020715 <--
WO 2003010506	A3	20040722		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1461452	A2	20040929	EP 2002-745718	20020715 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002011350	A	20050517	BR 2002-11350	20020715 <--
JP 2005527779	T2	20050915	JP 2003-515830	20020715 <--
CN 1671862	A	20050921	CN 2002-814913	20020715 <--
US 2003180790	A1	20030925	US 2003-437812	20030514 <--
ZA 2004001363	A	20040827	ZA 2004-1363	20040219 <--

PRIORITY APPLN. INFO.:

US 2000-490273	A2	20000124 <--
US 2001-911047	A2	20010723 <--
US 2001-998155	A2	20011129 <--
US 2002-120092	A2	20020410 <--

WO 2002-IB2788 W 20020715 <--

AB A **method** for homogeneously assaying biopolymer bonding, specifically nucleic acid hybridization, includes obtaining signals from a test sample before, during and/or after the application of stimulus to the test sample and correlating the signals. The signals, whose magnitude correlate with binding affinity, can be, for example, elec. conductance and/or **fluorescent** intensity. The stimulus can be, for example, elec. voltage and/or laser radiation. Preferably, different types of signals are measured and compared so as to enhance the reliability of the assay.

L18 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:573330 HCAPLUS
DOCUMENT NUMBER: 137:121876
TITLE: Biochips with through-holes
INVENTOR(S): Nagasawa, Hiroshi
PATENT ASSIGNEE(S): Ebara Corporation, Japan
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1226871	A2	20020731	EP 2002-1708	20020124 <--
EP 1226871	A3	20040121		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002218974	A2	20020806	JP 2001-16012	20010124 <--
US 2002127585	A1	20020912	US 2002-53869	20020124 <--
PRIORITY APPLN. INFO.:			JP 2001-16012 A	20010124 <--

AB A reaction **probe** chip comprising a substrate having a plurality of discrete, regularly arranged through-holes; and a carrier filled into and held in the through-holes, the carrier having **probe** mols. fixed thereto such that the **probe** mols. are different according to the through-holes. The carrier having the **probe** mols. fixed thereto is preferably a porous membrane, a nonwoven fabric, or porous glass entangled with or bound to the porous membrane or nonwoven fabric. A reaction product detection system flows a sample, including **fluorescence** labeled DNA to be detected, simultaneously and slowly through a plurality of discrete through-holes regularly arranged in a substrate, thereby binding an analyte to **probe** mols., and detects the analyte by a **fluorescence** detector. The reaction **probe** chip and the detection system based on a convenient **method** for preparing DNA Chip can be used in various diagnoses of physiol. functions, including DNA polymorphism.

L18 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:540187 HCAPLUS
DOCUMENT NUMBER: 137:90551
TITLE: Device and **method** for tracking conditions in an assay
INVENTOR(S): Ellson, Richard N.; Mutz, Mitchell W.; Harris, David L.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Ser. No. 751,231.
CODEN: USXXCO

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002094537	A1	20020718	US 2001-40925	20011228 <--
US 2002086294	A1	20020704	US 2000-751231	20001229 <--
PRIORITY APPLN. INFO.:			US 2000-751231 A2	20001229 <--

AB The invention provides a device comprising a substrate having a plurality of different mol. **probes** attached to a surface thereof and an integrated indicator that exhibits a response when exposed to a condition to which the substrate may be exposed. Each different mol. **probe** is selected to interact with a different corresponding target, and the indicator response is detectable after removing the indicator from the condition. Alternatively, a substrate is provided having a plurality of mol. **probes** attached to a surface thereof and a plurality of different integrated indicators. Each indicator is selected to exhibit a response when exposed to one of a plurality of conditions to which the substrate may be exposed. The inventive devices are typically used for biomol., or more specifically, nucleotidic assays. The invention also provides for various apparatuses and **methods** for assaying a sample using the inventive devices.

L18 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:522159 HCAPLUS
DOCUMENT NUMBER: 137:59858
TITLE: **Method** and apparatus using a surface-selective nonlinear optical technique
INVENTOR(S): Salafsky, Joshua S.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002054071	A1	20020711	WO 2001-US22441	20010717 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2434076	AA	20020711	CA 2001-2434076	20010717 <--
EP 1358482	A1	20031105	EP 2001-954721	20010717 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004530105	T2	20040930	JP 2002-554718	20010717 <--
PRIORITY APPLN. INFO.:			US 2001-260261P P	20010108 <--
			US 2001-260300P P	20010108 <--
			US 2001-262214P P	20010117 <--
			WO 2001-US22441 W	20010717 <--

AB A surface-selective nonlinear optical technique, such as second harmonic or sum frequency generation, is used to detect target-**probe** binding reactions or their effects, at an interface, without the use of labels. In addition, the direction of the nonlinear light is scattered from the interface in a well-defined direction and therefore its incidence at a detector some distance from the interface may be easily mapped to a specific and known location at the interface.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:505290 HCAPLUS
DOCUMENT NUMBER: 137:43881
TITLE: Device and **method** for tracking conditions in an assay
INVENTOR(S): Ellson, Richard N.; Mutz, Mitchell W.; Harris, David L.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 20 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002086294	A1	20020704	US 2000-751231	20001229 <--
WO 2002053777	A2	20020711	WO 2001-US50764	20011228 <--
WO 2002053777	A3	20030227		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002094537	A1	20020718	US 2001-40925	20011228 <--
US 2006147977	A1	20060706	US 2006-361449	20060224 <--
PRIORITY APPLN. INFO.:			US 2000-751231 A	20001229 <--

AB The invention provides a device comprising a substrate having a plurality of different mol. **probes** attached to a surface thereof and an integrated indicator that exhibits a response when exposed to a condition to which the substrate may be exposed. Each different mol. **probe** is selected to interact with a different corresponding target, and the indicator response is detectable after removing the indicator from the condition. Alternatively, a substrate is provided having a plurality of mol. **probes** attached to a surface thereof and a plurality of different integrated indicators. Each indicator is selected to exhibit a response when exposed to one of a plurality of conditions to which the substrate may be exposed. The inventive devices are typically used for biomol., or more specifically, nucleotidic assays. The invention also provides for various apparatuses and **methods** for assaying a sample using the inventive devices.

L18 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:488155 HCAPLUS
DOCUMENT NUMBER: 137:43871

TITLE: Devices and **methods** to form a randomly ordered array of magnetic beads and uses thereof in high-throughput genotyping
INVENTOR(S): Jain, Maneesh; White, Robert L.; Roberts, Lester A.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 41 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2002081714	A1	20020627	US 2001-923752		20010807 <--
PRIORITY APPLN. INFO.:			US 2000-202357P	P	20000505 <--
			US 2000-223125P	P	20000807 <--

AB The invention includes devices and **methods** for forming random arrays of magnetic particles, arrays formed using these devices and **methods**, and to **methods** of using the arrays. The invention provides an assembly (chip) with magnetic domains that produce localized magnetic fields capable of immobilizing magnetic particles such as com. available magnetic beads. **Probe** or sensor mols. can be coupled to the beads, which are then dispersed on the assembly, forming a random order array. The arrays can be used for analyzing samples, targets, and/or the interaction between samples and targets. The invention finds particular use in processes such as high-throughput genotyping and other nucleic acid hybridization-based assays. The invention offers a number of significant advantages in comparison with traditional DNA arrays in which **probes** are bound to a substrate.

L18 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:314832 HCAPLUS
DOCUMENT NUMBER: 136:321652
TITLE: **Method** and device for the integrated synthesis and analysis of analytes on a support
INVENTOR(S): Staehler, Cord F.; Gueimil, Ramon; Scheffler, Matthias; Staehler, Peer F.; Heidbrede, Anke
PATENT ASSIGNEE(S): Febit A.-G., Germany
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032567	A1	20020425	WO 2001-EP12027	20011017 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10051396	A1	20020418	DE 2000-10051396	20001017 <--
AU 2002010552	A5	20020429	AU 2002-10552	20011017 <--

EP 1330307	A1	20030730	EP 2001-978431	20011017 <--
EP 1330307	B1	20050907		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
AT 303863	E	20050915	AT 2001-978431	20011017 <--
US 2004043509	A1	20040304	US 2003-399450	20030801 <--
PRIORITY APPLN. INFO.:			DE 2000-10051396 A	20001017 <--
			US 2000-240793P P	20001017 <--
			WO 2001-EP12027 W	20011017 <--

AB The invention relates to a **method** for producing receptor-coated particles, which comprises: (a) providing a support, (b) guiding a particle-containing liquid into or onto the support, (c) immobilizing the particles on at least one surface of the support, (d) guiding a liquid that contains receptor or receptor components for the synthesis of polymer receptors across the immobilized particles, (e) coupling the receptors or receptor components in corresponding predetd. positions of the support to the immobilized particles in a manner specific with respect to location and/or time, (f) optionally repeating steps (d) and (e) until the desired receptors have been synthesized on the immobilized particles in the corresponding predetd. positions of the support.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:293884 HCAPLUS
DOCUMENT NUMBER: 136:320311
TITLE: Dendritically amplified detection **method**
INVENTOR(S): Willner, Itamar
PATENT ASSIGNEE(S): Yissum Research Development Company of the Hebrew University of Jerusalem, Israel; Patolsky, Fernando
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002031191	A2	20020418	WO 2001-IL886	20010924 <--
WO 2002031191	A3	20030912		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
IL 138988	A1	20050925	IL 2000-138988	20001012
CA 2424435	AA	20020418	CA 2001-2424435	20010924 <--
AU 2001094150	A5	20020422	AU 2001-94150	20010924 <--
EP 1368490	A2	20031210	EP 2001-974639	20010924 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005507488	T2	20050317	JP 2002-534556	20010924 <--
US 2004048272	A1	20040311	US 2003-381131	20030828 <--
PRIORITY APPLN. INFO.:			IL 2000-138988 A	20001012 <--

WO 2001-IL886 W 20010924 <--

AB A **method** and system for the detection of a target nucleic acid in a sample solution The target nucleic acid comprises a first and a second end sequence, one of the end sequences being a 5' end sequence and the other end sequence being a 3' end sequence. The **method** comprises: attaching to a solid surface a first oligonucleotide **probe**, at least a portion of which is complementary to the first end sequence of the target nucleic acid; contacting the solid surface with the sample solution, thereby allowing the first **probe** to bind the target nucleic acid. The present invention provides a second semiconductor nanoparticle to which has been attached a second oligonucleotide **probe**, at least a portion of which is complementary to the second end sequence of the target nucleic acid, contacting the solid surface with the second nanoparticle, thereby allowing the second **probe** to bind the bound target nucleic acid. The invention further provides a nanoparticle to which has been attached the first oligonucleotide **probe** and pre-incubating the first nanoparticle with the target nucleic acid, thereby allowing the first **probe** to bind the target nucleic acid, contacting the solid surface with the pre-incubated first nanoparticle, thereby allowing the target nucleic acid bound to the first **probe** to bind the second **probe** on the second nanoparticle; and detecting the presence of the nanoparticles on the solid surface, therby detecting the target nucleic acid.

L18 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:241276 HCAPLUS
DOCUMENT NUMBER: 136:244001
TITLE: Integrated active flux microfluidic devices and **methods**
INVENTOR(S): Quake, Stephen R.; Chou, Hou-Pu
PATENT ASSIGNEE(S): California Institute of Technology, USA
SOURCE: U.S. Pat. Appl. Publ., 72 pp., Cont.-in-part of U.S. Ser. No. 724,548.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2002037499	A1	20020328	US 2001-875438		20010605 <--
US 6767706	B2	20040727			
US 2004248167	A1	20041209	US 2004-801361		20040315 <--
PRIORITY APPLN. INFO.:			US 2000-209243P	P	20000605 <--
			US 2000-211309P	P	20000613 <--
			US 2000-249360P	P	20001116 <--
			US 2000-724548	A2	20001128 <--
			US 2001-875438	A1	20010605 <--

AB The invention relates to a microfabricated device for the rapid detection of DNA, proteins or other mols. associated with a particular disease. The devices and **methods** of the invention can be used for the simultaneous diagnosis of multiple diseases by detecting mols. (e.g. amts. of mols.), such as polynucleotides (e.g., DNA) or proteins (e.g., antibodies), by measuring the signal of a detectable reporter associated with hybridized polynucleotides or antigen/antibody complex. In the microfabricated device according to the invention, detection of the presence of mols. (i.e., polynucleotides, proteins, or antigen/antibody complexes) are correlated to a hybridization signal from an

optically-detectable (e.g. **fluorescent**) reporter associated with the bound mols. These hybridization signals can be detected by any suitable means, for example optical, and can be stored for example in a computer as a representation of the presence of a particular gene. Hybridization **probes** can be immobilized on a substrate that forms part of or is exposed to a channel or channels of the device that form a closed loop, for circulation of sample to actively contact complementary **probes**. Universal chips according to the invention can be fabricated not only with DNA but also with other mols. such as RNA, proteins, peptide nucleic acid (PNA) and polyamide mols.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:220845 HCAPLUS
DOCUMENT NUMBER: 136:259532
TITLE: Target activated nucleic acid biosensor and **methods** of using same
INVENTOR(S): Stanton, Marty; Epstein, David; Hamaguchi, Nobuko
PATENT ASSIGNEE(S): Archemix Corporation, USA
SOURCE: PCT Int. Appl., 144 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2002022882	A2	20020321	WO 2001-US28835		20010913 <--
WO 2002022882	A3	20030821			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2418724	AA	20020321	CA 2001-2418724		20010913 <--
AU 2001090965	A5	20020326	AU 2001-90965		20010913 <--
EP 1354062	A2	20031022	EP 2001-971029		20010913 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
JP 2004527220	T2	20040909	JP 2002-527322		20010913 <--
PRIORITY APPLN. INFO.:			US 2000-232454P	P	20000913 <--
			WO 2001-US28835	W	20010913 <--

AB The invention concerns **methods** for engineering a target activated biosensor are provided. Biosensors comprise a plurality of nucleic acid sensor mols. labeled with a first signaling moiety and a second signaling moiety. The nucleic acid sensor mols. recognizes target mols. which do not naturally bind to DNA. Binding of a target mol. to the sensor mols. triggers a change in the proximity of the signaling moieties which leads to a change in the optical properties of the nucleic acid sensor mols. on the biosensor. Reagents and systems for performing the **method** are also provided. The **method** is useful in diagnostic applications and drug optimization. Diagrams describing the apparatus assembly and operation are given.

L18 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:220455 HCAPLUS
DOCUMENT NUMBER: 136:243980
TITLE: Microfabricated reaction chamber system for real time nucleic acid amplification
INVENTOR(S): Karlsen, Frank
PATENT ASSIGNEE(S): Norchip A/S, Norway; Allard, Susan Joyce
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002022265	A1	20020321	WO 2001-GB4145	20010917 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
GB 2368809	A1	20020515	GB 2000-22754	20000915 <--
GB 2368809	B2	20040929		
AU 2001087870	A5	20020326	AU 2001-87870	20010917 <--
EP 1317320	A1	20030611	EP 2001-967495	20010917 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004053268	A1	20040318	US 2003-363852	20031006 <--
PRIORITY APPLN. INFO.:			GB 2000-22754 A	20000915 <--
			WO 2001-GB4145 W	20010917 <--

AB The invention concern a microfabricated reaction chamber system for carrying out a nucleic acid sequence amplification and detection process on a nucleic acid sample, the process comprising at least first and second process steps using first and second reagents, the device comprising: an inlet port; a first reaction chamber in communication with the inlet port, for carrying out the first process step; a second reaction chamber in communication with the first reaction chamber, for carrying out the second process step; and an outlet port in communication with the second reaction chamber. Diagrams describing the apparatus assembly and operation are given.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:142981 HCAPLUS
DOCUMENT NUMBER: 136:163688
TITLE: Microarray detector and synthesizer
INVENTOR(S): Sandstrom, Perry
PATENT ASSIGNEE(S): Able Signal Company, LLC, USA
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002014838	A2	20020221	WO 2001-US41698	20010814 <--
WO 2002014838	A3	20020606		
WO 2002014838	C1	20020718		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 6567163	B1	20030520	US 2000-640617	20000817
US 6545758	B1	20030408	US 2000-679858	20001005 <--
AU 2001087180	A5	20020225	AU 2001-87180	20010814 <--
EP 1311828	A2	20030521	EP 2001-966691	20010814 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:	US 2000-640617	A	20000817 <--
	US 2000-679858	A	20001005 <--
	WO 2001-US41698	W	20010814 <--

AB The present invention relates to novel systems, devices, and **methods** comprising spatial light modulators for use in the reading and synthesis of microarrays. For example, the present invention provides micromirror systems for synthesizing and acquiring data from nucleic acid microarrays and systems for collecting, processing, and analyzing data obtained from a microarray.

L18 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2001:904597 HCAPLUS
DOCUMENT NUMBER:	136:17684
TITLE:	Integrated active flux microfluidic devices and **methods**
INVENTOR(S):	Quake, Stephen R.; Chou, Hou-pu
PATENT ASSIGNEE(S):	California Institute of Technology, USA
SOURCE:	PCT Int. Appl., 177 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001094635	A2	20011213	WO 2001-US18400	20010605 <--
WO 2001094635	C2	20020808		
WO 2001094635	A3	20021031		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, EC, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1290226	A2	20030312	EP 2001-942042	20010605 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2003536058	T2	20031202	JP 2002-502175		20010605 <--
PRIORITY APPLN. INFO.:			US 2000-209243P	P	20000605 <--
			US 2000-211309P	P	20000613 <--
			US 2000-249360P	P	20001116 <--
			US 2000-724548	A2	20001128 <--
			WO 2001-US18400	W	20010605 <--

AB The invention relates to a microfabricated device for the rapid detection of DNA, proteins or other mols. associated with a particular disease. The devices and **methods** of the invention can be used for the simultaneous diagnosis of multiple diseases by detecting mols. (e.g. amts. of mols.), such as polynucleotides (e.g., DNA) or proteins (e.g., antibodies), by measuring the signal of a detectable reporter associated with hybridized polynucleotides or antigen/antibody complex. In the microfabricated device according to the invention, detection of the presence of mols. (i.e., polynucleotides, proteins, or antigen/antibody complexes) are correlated to a hybridization signal from an **optically-detectable** (e.g. **fluorescent**) reporter associated with the bound mols. These hybridization signals can be detected by any suitable means, for example optical, and can be stored for example in a computer as a representation of the presence of a particular gene. Hybridization **probes** can be immobilized on a substrate that forms part of or is exposed to a channel or channels of the device that form a closed loop, for circulation of sample to actively contact complementary **probes.** Universal chips according to the invention can be fabricated not only with DNA but also with other mols. such as RNA, proteins, peptide nucleic acid (PNA) and polyamide mols.

L18 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2001:816981 HCAPLUS
DOCUMENT NUMBER:	135:341205
TITLE:	Colloid compositions for solid phase biomolecular analytical, preparative and identification systems
INVENTOR(S):	Audeh, Zuheir L.; Fici, Dolores A.; McCormick, William
PATENT ASSIGNEE(S):	The Center for Blood Research, Inc., USA
SOURCE:	PCT Int. Appl., 50 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001083825	A2	20011108	WO 2001-US14373	20010504 <--
WO 2001083825	A3	20030306		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2408094	AA	20011108	CA 2001-2408094	20010504 <--
AU 2001059455	A5	20011112	AU 2001-59455	20010504 <--
US 2002015958	A1	20020207	US 2001-848777	20010504 <--
US 6921637	B2	20050726		

EP 1307743 A2 20030507 EP 2001-932980 20010504 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2003532091 T2 20031028 JP 2001-580432 20010504 <--
US 2005142666 A1 20050630 US 2005-71674 20050303 <--
PRIORITY APPLN. INFO.: US 2000-201908P P 20000504 <--
US 2001-848777 A3 20010504 <--
WO 2001-US14373 W 20010504 <--

AB A liquid composition comprising a colloidal suspension of a biomol.-binding matrix material (preferably nitrocellulose) dispersed in a liquid, with particles of the matrix material being of a defined particle size, and replicate copies of a biomol., e.g., protein or nucleic acid **probes**, which are distributed, preferably uniformly, throughout the colloidal suspension and are bound to the matrix material particles, is disclosed. The liquid composition of the invention can be used directly for sample anal. or preparation of biomols., or aliquots of the composition can be spotted onto a support to form a microporous matrix system or microarray for anal. or preparation of biomols. Compns. and microarrays according to the invention are useful in any type of anal. or preparative procedure relating to biomols. They are particularly useful, e.g., in **methods** for detecting a biomol. analyte in a liquid sample, **methods** for determining the presence of a particular nucleic acid sequence within a liquid sample and **methods** for determining the presence of a drug candidate mol. in a liquid sample. The invention further comprises kits for practicing the various **methods** of the invention. Nitrocellulose colloidal suspensions were used to prepare DNA and protein microarrays for HLA typing and for determining specific antibodies to disease antigens, resp.

L18 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:816969 HCAPLUS
DOCUMENT NUMBER: 135:353723
TITLE: Identification of microsatellite marker or single nucleotide polymorphism by DNA array
INVENTOR(S): Hager, Joerg; Gut, Ivo Glynne
PATENT ASSIGNEE(S): Centre National De La Recherche Scientifique, Fr.; Institut National De La Sante Et De La Recherche Medicale
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001083813	A1	20011108	WO 2001-EP4871	20010430 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2407731	AA	20011108	CA 2001-2407731	20010430 <--
EP 1278894	A1	20030129	EP 2001-973783	20010430 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
US 2004014056 A1 20040122 US 2003-258867 20030110 <--
PRIORITY APPLN. INFO.: EP 2000-401202 A 20000502 <--
WO 2001-EP4871 W 20010430 <--

AB The present invention relates to a **method** for the identification of the presence of a genetic marker in a DNA sample, in particular by using an oligonucleotide array. In particular, the **method** according to the invention allows for the identification and/or localization of gene(s) associated with a distinguishable phenotype. The complexity of the sample can be reduced e.g. by the **method** of genome mismatch scanning.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:360267 HCAPLUS
DOCUMENT NUMBER: 134:363631
TITLE: Apparatus and **method** for calibration of a microarray scanning system
INVENTOR(S): Noblett, David
PATENT ASSIGNEE(S): GSI Lumonics, Inc., USA
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001035074	A1	20010517	WO 2000-US41170	20001012 <--
WO 2001035074	C2	20020801		
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6471916	B1	20021029	US 1999-437039	19991109
CA 2390651	AA	20010517	CA 2000-2390651	20001012 <--
EP 1228354	A1	20020807	EP 2000-989657	20001012 <--
EP 1228354	B1	20060104		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
AT 315222	E	20060215	AT 2000-989657	20001012 <--

PRIORITY APPLN. INFO.: US 1999-437039 A 19991109 <--
WO 2000-US41170 W 20001012 <--

AB A microarray scanning system for conducting microarray expts. on a planar substrate includes an excitation radiation source, a detection system, and a computational device, the planar substrate supporting a plurality of dilution marks containing a fluorophore and located on the substrate surface at predetd. distances from a fiducial reference mark and/or a microarray. Automatic calibration adjustment of either or both the detection system and the excitation radiation source is achieved via the computational device by irradiating the dilution spots, detecting emission radiation produced by the dilution spot fluorophore material, deriving a series of brightness readings from the levels of emission radiation detected at corresponding dilution spots; analyzing the brightness readings to obtain a fluorophore brightness characteristic as a function of concentration; and adjusting the sensitivity of the detection system and/or the intensity level of the source of excitation radiation in accordance with the fluorophore brightness characteristic.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:110657 HCAPLUS
DOCUMENT NUMBER: 135:206022
TITLE: Portable system for microbial sample preparation and oligonucleotide microarray analysis
AUTHOR(S): Bavykin, Sergei G.; Akowski, James P.; Zakhariev, Vladimir M.; Barsky, Viktor E.; Perov, Alexander N.; Mirzabekov, Andrei D.
CORPORATE SOURCE: BioChip Technology Center, Argonne National Laboratory, Argonne, IL, 60439, USA
SOURCE: Applied and Environmental Microbiology (2001), 67(2), 922-928
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We have developed a three-component system for microbial identification that consists of (i) a universal syringe-operated silica minicolumn for successive DNA and RNA isolation, fractionation, fragmentation, **fluorescent** labeling, and removal of excess free label and short oligonucleotides; (ii) microarrays of immobilized oligonucleotide **probes** for 16S rRNA identification; and (iii) a portable battery-powered device for imaging the hybridization of **fluorescently** labeled RNA fragments with the arrays. The minicolumn combines a guanidine thiocyanate **method** of nucleic acid isolation with a newly developed hydroxyl radical-based technique for DNA and RNA labeling and fragmentation. DNA and RNA can also be fractionated through differential binding of double- and single-stranded forms of nucleic acids to the silica. The procedure involves sequential washing of the column with different solns. No vacuum filtration steps, phenol extraction, or centrifugation is required. After hybridization, the overall **fluorescence** pattern is captured as a digital image or as a Polaroid photo. This three-component system was used to discriminate Escherichia coli, Bacillus subtilis, Bacillus thuringiensis, and human HL60 cells. The procedure is rapid: beginning with whole cells, it takes approx. 25 min to obtain labeled DNA and RNA samples and an addnl. 25 min to hybridize and acquire the microarray image using a stationary image anal. system or the portable imager.
REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> d que stat l17
L7        31379 SEA FILE=HCAPLUS ABB=ON  MICROARRAY TECHNOLOGY+ALL
L8            7 SEA FILE=HCAPLUS ABB=ON  L7 AND ?SUBARRAY?
L9          242 SEA FILE=HCAPLUS ABB=ON  L7 AND (?OPTICAL?(W)?DETECT? OR
                ?MACHINE?(W)?READ?)
L10         248 SEA FILE=HCAPLUS ABB=ON  L8 OR L9
L11          75 SEA FILE=HCAPLUS ABB=ON  L10 AND (?PROBE? OR ?HAPTEN?)
L12          49 SEA FILE=HCAPLUS ABB=ON  L11 AND (?FLUORESC? OR ?ILLUMIN?)
L13           1 SEA FILE=HCAPLUS ABB=ON  L12 AND ?VISUAL?(W)?ALIGN?
L14          35 SEA FILE=HCAPLUS ABB=ON  L12 AND ?METHOD?
L15          35 SEA FILE=HCAPLUS ABB=ON  L13 OR L14
L16           2 SEA L15
L17           1 DUP REMOV L16 (1 DUPLICATE REMOVED)

=> d ibib abs l17 1-1

L17  ANSWER 1 OF 1     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:   2000295343     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 10833327
TITLE:              Positional cloning utilizing genomic DNA microarrays: the
                    Niemann-Pick type C gene as a model system.
AUTHOR:             Stephan D A; Chen Y; Jiang Y; Malechek L; Gu J Z; Robbins C
                    M; Bittner M L; Morris J A; Carstea E; Meltzer P S; Adler
                    K; Garlick R; Trent J M; Ashlock M A
CORPORATE SOURCE:   Cancer Genetics Branch, National Human Genome Research
                    Institute, Bethesda, MD 20892, USA.. dstephan@nhgri.nih.gov
SOURCE:             Molecular genetics and metabolism, (2000 May) Vol. 70, No.
                    1, pp. 10-8.
                    Journal code: 9805456. ISSN: 1096-7192.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        200007
ENTRY DATE:         Entered STN: 28 Jul 2000
                    Last Updated on STN: 28 Jul 2000
                    Entered Medline: 19 Jul 2000
AB   A major obstacle in positional cloning is identifying the specific mutated
     gene from within a large physical contig. Here we describe the
     application of DNA microarray technology to a defined
     genomic region (physical map) to identify: (i) exons without a priori
     sequence data and (ii) the disease gene based on differential gene
     expression in a recessive disorder. The feasibility was tested using
     resources from the positional cloning of the Neimann-Pick Type C (NP-C)
     disease gene, NPC1. To identify NPC1 exons and optimize the technology,
     an array was generated from genomic fragments of the 110-kb bacterial
     artificial chromosome, 108N2, which encodes NPC1. First, as a test case
     for blindly identifying exons, fluorescently labeled NPC1 cDNA
     identified 108N2 fragments that contained NPC1 exons, many of which also
     contained intronic sequences and could be used to determine part of the
     NPC1 genomic structure. Second, to demonstrate that the NPC1 disease gene
     could be identified based upon differential gene expression,
     subarrays of 108N2 fragments were hybridized with
     fluorescently labeled cDNA probes generated from total
     RNA from hamster cell lines differentially expressing NPC1. A
     probe derived from the NP-C cell line CT60 did not detect NPC1
     exons or other genomic fragments from 108N2. In contrast, several NPC1
     exons were detected by a probe generated from the non-NP-C cell
     line 911D5A13, which was derived from CT60, and expressed NPC1 as a
     consequence of stable transduction with a YAC that contains NPC1 and
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encompasses 108N2. Thus, the array technology identified NPC1 as a candidate gene based on a physical contig and differential NPC1 expression between NP-C and non-NP-C cells. This technique should facilitate gene identification when a physical contig exists for a region of interest and mutations result in changes in the mRNA level of the disease gene or portions thereof.

```
=> d que stat l24
L7        31379 SEA FILE=HCAPLUS ABB=ON  MICROARRAY TECHNOLOGY+ALL
L8            7 SEA FILE=HCAPLUS ABB=ON  L7 AND ?SUBARRAY?
L9          242 SEA FILE=HCAPLUS ABB=ON  L7 AND (?OPTICAL?(W)?DETECT? OR
                ?MACHINE?(W)?READ?)
L10         248 SEA FILE=HCAPLUS ABB=ON  L8 OR L9
L11          75 SEA FILE=HCAPLUS ABB=ON  L10 AND (?PROBE? OR ?HAPTEN?)
L12          49 SEA FILE=HCAPLUS ABB=ON  L11 AND (?FLUORESC? OR ?ILLUMIN?)
L13           1 SEA FILE=HCAPLUS ABB=ON  L12 AND ?VISUAL?(W)?ALIGN?
L14          35 SEA FILE=HCAPLUS ABB=ON  L12 AND ?METHOD?
L15          35 SEA FILE=HCAPLUS ABB=ON  L13 OR L14
L19          95 SEA FILE=USPATFULL ABB=ON  L15 AND (PRD<20020930 OR PD<20020930
                )
L20           3 SEA FILE=USPATFULL ABB=ON  L19 AND ?VISUAL?(3A)?ALIGN?
L22          44 SEA FILE=USPATFULL ABB=ON  L19 AND ?BIOTINYLAT?
L23          46 SEA FILE=USPATFULL ABB=ON  L20 OR L22
L24          20 SEA FILE=USPATFULL ABB=ON  L23 AND ?LIGHT?(W)?SCATTER?

=> d ibib abs l24 1-20

L24  ANSWER 1 OF 20  USPATFULL on STN
ACCESSION NUMBER:        2006:145963  USPATFULL
TITLE:                   Methods of screening agents for activity
                         using teleosts
INVENTOR(S):             Serbedzija, George N., Woburn, MA, UNITED STATES
                         Semino, Carlos, Cambridge, MA, UNITED STATES
                         Frost, Deanna M., Seattle, WA, UNITED STATES
PATENT ASSIGNEE(S):      Phylonix Pharmaceuticals, Inc., Cambridge, MA, UNITED
                         STATES (U.S. corporation)

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2006123487      A1   20060608
APPLICATION INFO.:       US 2005-320251     A1   20051227  (11)
RELATED APPLN. INFO.:    Continuation of Ser. No. US 2005-114712, filed on 25
                         Apr 2005, PENDING Continuation of Ser. No. US
                         2003-678765, filed on 2 Oct 2003, PENDING Continuation
                         of Ser. No. US 2000-645432, filed on 23 Aug 2000,
                         GRANTED, Pat. No. US 6656449 Continuation-in-part of
                         Ser. No. US 1999-255397, filed on 22 Feb 1999, GRANTED,
                         Pat. No. US 6299858

                               NUMBER         DATE
                         ------------------ --------
PRIORITY INFORMATION:    US 1998-75783P     19980223 (60)            <--
                         US 1998-100950P    19980918 (60)            <--
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO
                         CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS:        14
EXEMPLARY CLAIM:         1-29
NUMBER OF DRAWINGS:      19 Drawing Page(s)
LINE COUNT:              4057
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     The present invention provides methods of screening an agent
       for activity using teleosts. Methods of screening an agent for
       angiogenesis activity, toxic activity and an effect cell death activity
       in teleosts are provided. The invention further provides high throughput
       methods of screening agents in multi-well plates.
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 2 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2006:40622 USPATFULL
TITLE: Unique recognition sequences and **methods** of use thereof in protein analysis
INVENTOR(S): Lee, Frank D., Chestnut Hill, MA, UNITED STATES
Meng, Xun, Shanghai, CHINA
Chan, John W., Research Triangle Park, NC, UNITED STATES
Zhang, Shengsheng, Framingham, MA, UNITED STATES
Benkovic, Stephen J., State College, PA, UNITED STATES
PATENT ASSIGNEE(S): EPITOME BIOSYSTEMS INC., Waltham, MA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006035270	A1	20060216
APPLICATION INFO.:	US 2005-249847	A1	20051013 (11)

RELATED APPLN. INFO.: Division of Ser. No. US 2003-436549, filed on 12 May 2003, PENDING

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2002-379626P	20020510 (60)	<--
	US 2002-393197P	20020701 (60)	<--
	US 2002-393233P	20020701 (60)	<--
	US 2002-393235P	20020701 (60)	<--
	US 2002-393211P	20020701 (60)	<--
	US 2002-393223P	20020701 (60)	<--
	US 2002-393280P	20020701 (60)	<--
	US 2002-393137P	20020701 (60)	<--
	US 2002-430948P	20021204 (60)	
	US 2002-433319P	20021213 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FISH & NEAVE IP GROUP, ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624, US
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 5587
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are **methods** for reliably detecting the presence of proteins in a sample by the use of capture agents that recognize and interact with recognition sequences uniquely characteristic of a set of proteins in the sample. Arrays comprising these capture agents are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 3 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2006:28014 USPATFULL
TITLE: Multiplex analysis using membrane-bound sensitizers
INVENTOR(S): Singh, Sharat, San Jose, CA, UNITED STATES
Chan-Hui, Po-Ying, Oakland, CA, UNITED STATES
Kirakossian, Hrair, San Jose, CA, UNITED STATES

	NUMBER	KIND	DATE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006024846	A1	20060202
APPLICATION INFO.:	US 2005-214234	A1	20050827 (11)

RELATED APPLN. INFO.: Division of Ser. No. US 2003-379965, filed on 4 Mar 2003, GRANTED, Pat. No. US 6949347

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2002-361975P	20020305 (60)	<--
	US 2003-440838P	20030117 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MACEVICZ, STEPHEN C., 345 OYSTER POINT BLVD, SOUTH SAN FRANSISCO, CA, 94080, US
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1-12
NUMBER OF DRAWINGS: 50 Drawing Page(s)
LINE COUNT: 3017
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to **methods** and compositions for determining the presence, absence, and/or amounts of one or more membrane-associated analytes in a sample. In accordance with the invention, binding compounds derivatized with releasable molecular tags specifically bind to selected membrane-associated analytes, after which the molecular tags are released upon activation of cleavage moieties, or sensitizers, anchored in the same membrane as the membrane-associated analytes. The released molecular tags are then identified by their distinct separation and detection characteristics.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 4 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2006:15830 USPATFULL
TITLE: Proteome epitope tags and **methods** of use thereof in protein modification analysis
INVENTOR(S): Benkovic, Stephen J., State College, PA, UNITED STATES
Chan, John W., Research Triangle Park, NC, UNITED STATES
Lee, Frank D., Chestnut Hill, MA, UNITED STATES
Meng, Xun, Newton, MA, UNITED STATES
Gordon, Neal, Lexington, MA, UNITED STATES
PATENT ASSIGNEE(S): Epitome Biosystems, Inc., Waltham, MA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006014212	A1	20060119
APPLICATION INFO.:	US 2005-66967	A1	20050225 (11)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2004-773032, filed on 5 Feb 2004, PENDING Continuation-in-part of Ser. No. US 2003-712425, filed on 13 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-436549, filed on 12 May 2003, PENDING

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2002-379626P	20020510 (60)	<--
	US 2002-393197P	20020701 (60)	<--
	US 2002-393233P	20020701 (60)	<--
	US 2002-393235P	20020701 (60)	<--

	US 2002-393211P	20020701 (60)	<--
	US 2002-393223P	20020701 (60)	<--
	US 2002-393280P	20020701 (60)	<--
	US 2002-393137P	20020701 (60)	<--
	US 2002-430948P	20021204 (60)	
	US 2002-433319P	20021213 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FISH & NEAVE IP GROUP, ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624, US
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 38 Drawing Page(s)
LINE COUNT: 7086
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are reagents and **methods** for reliably detecting the presence and measuring the amount of proteins, including proteins with various post-translational modifications (phosphorylation, glycosylation, methylation, acetylation, etc.) in a sample by the use of one or more capture agents that recognize and interact with recognition sequences uniquely characteristic of a protein or a set of proteins (Proteome Epitope Tags, or PETs) in the sample. Arrays comprising these capture agents or PETs are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 5 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2005:216746 USPATFULL
TITLE: **Methods** of screening agents for activity using teleosts
INVENTOR(S): Serbedzija, George N., Woburn, MA, UNITED STATES
Semino, Carlos, Cambridge, MA, UNITED STATES
Frost, Deanna M., Seattle, WA, UNITED STATES
PATENT ASSIGNEE(S): Phylonix Pharmaceuticals, Inc., Cambridge, MA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2005188426	A1	20050825	
APPLICATION INFO.:	US 2005-114712	A1	20050425	(11)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2003-678765, filed on 2 Oct 2003, PENDING Continuation of Ser. No. US 2000-645432, filed on 23 Aug 2000, GRANTED, Pat. No. US 6656449 Continuation-in-part of Ser. No. US 1999-255397, filed on 22 Feb 1999, GRANTED, Pat. No. US 6299858

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1998-100950P	19980918 (60)	<--
	US 1998-75783P	19980223 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 33
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Page(s)
LINE COUNT: 4101
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides **methods** of screening an agent

for activity using teleosts. **Methods** of screening an agent for angiogenesis activity, toxic activity and an effect cell death activity in teleosts are provided. The invention further provides high throughput **methods** of screening agents in multi-well plates.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 6 OF 20 USPATFULL on STN

ACCESSION NUMBER:	2005:189352 USPATFULL
TITLE:	**Method** and system for rapid biomolecular recognition of amino acids and protein sequencing
INVENTOR(S):	Shipwash, Edward, Berkeley, CA, UNITED STATES
PATENT ASSIGNEE(S):	NanoBioDynamcis, Berkeley, CA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005164264	A1	20050728
APPLICATION INFO.:	US 2005-33689	A1	20050111 (11)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-927424, filed on 9 Aug 2001, GRANTED, Pat. No. US 6846638

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2000-224551P	20000810 (60)	<--

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS:	67
EXEMPLARY CLAIM:	1-102
NUMBER OF DRAWINGS:	30 Drawing Page(s)
LINE COUNT:	5478

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Methods**, compositions, kits, and apparatus are provided wherein the aminoacyl-tRNA synthetase system is used to analyze amino acids. The **method** allows very small devices for quantitative or semi-quantitative analysis of the amino acids in samples or in sequential or complete proteolytic digestions. The **methods** can be readily applied to the detection and/or quantitation of one or more primary amino acids by using cognate aminoacyl-tRNA synthetase and cognate tRNA. The basis of the **method** is that each of the 20 synthetases and/or a tRNA specific for a different amino acid is separated spatially or differentially labeled. The reactions catalyzed by all 20 synthetases may be monitored simultaneously, or nearly simultaneously, or in parallel. Each separately positioned synthetase or tRNA will signal its cognate amino acid. The synthetase reactions can be monitored using continuous spectroscopic assays. Alternatively, since elongation factor Tu:GTP (EF-Tu:GTP) specifically binds all AA-tRNAs, the aminoacylation reactions catalyzed by the synthetases can be monitored using ligand assays. Microarrays and microsensors for amino acid analysis are provided. Additionally, amino acid analysis devices are integrated with protease digestions to produce miniaturized enzymatic sequenators capable of generating either N- or C-terminal sequence and composition data for a protein or peptide. The possibility of parallel processing of many samples in an automated manner is discussed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 7 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2005:81469 USPATFULL
TITLE: Proteome epitope tags and **methods** of use thereof in protein modification analysis
INVENTOR(S): Lee, Frank D., Chestnut Hill, MA, UNITED STATES
Meng, Xun, Newton, MA, UNITED STATES
Afeyan, Noubar B., Lexington, MA, UNITED STATES
PATENT ASSIGNEE(S): engeneOS, Inc., Waltham, MA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005069911	A1	20050331
APPLICATION INFO.:	US 2004-773032	A1	20040205 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2003-712425, filed on 13 Nov 2003, PENDING Continuation-in-part of Ser. No. US 2003-436549, filed on 12 May 2003, PENDING

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2002-379626P	20020510 (60)	<--
	US 2002-393197P	20020701 (60)	<--
	US 2002-393233P	20020701 (60)	<--
	US 2002-393235P	20020701 (60)	<--
	US 2002-393211P	20020701 (60)	<--
	US 2002-393223P	20020701 (60)	<--
	US 2002-393280P	20020701 (60)	<--
	US 2002-393137P	20020701 (60)	<--
	US 2002-430948P	20021204 (60)	
	US 2002-433319P	20021213 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
NUMBER OF CLAIMS: 41
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 24 Drawing Page(s)
LINE COUNT: 12020
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are **methods** for reliably detecting the presence of proteins, including proteins with various post-translational modifications (phosphorylation, glycosylation, methylation, acetylation, etc.) in a sample by the use of one or more capture agents that recognize and interact with recognition sequences uniquely characteristic of a protein or a set of proteins (Proteome Epitope Tags, or PETs) in the sample. Arrays comprising these capture agents or PETs are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 8 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2005:30717 USPATFULL
TITLE: **Method** for the biochemical detection of analytes
INVENTOR(S): Rexhausen, Ulrich, Riedstr, GERMANY, FEDERAL REPUBLIC OF
Wick, Manfred, Wachterstr, GERMANY, FEDERAL REPUBLIC OF

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005026148	A1	20050203

APPLICATION INFO.: US 2004-478412 A1 20040527 (10)
WO 2002-DE1875 20020523

	NUMBER	DATE	
PRIORITY INFORMATION:	DE 2001-10127221	20010523	<--
	DE 2001-127220	20010523	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: NATH & ASSOCIATES, 1030 15th STREET, NW, 6TH FLOOR, WASHINGTON, DC, 20005
NUMBER OF CLAIMS: 37
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 1091
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a **method** for detecting and/or quantifying analytes from a sample on an analysis carrier that has been formatted using a digital data code. Detection fields comprising the sensor elements required for the respective detection process, together with additional data structures in a defined digital format, are provided on the analysis carrier and combined to form sequcnces of formatted structures that can be interpreted as code words. To detect and quantify an analyte in a sample, the latter is applied to the analysis carrier and the formation of signal-generating elements is initiated at locations of molecular interaction. The localisation of signal-generating elements in the respective detection fields causes a formatted structure at this location to be replaced by another. This leads to the conversion of one code word into another within the predetermined quantity of valid code words. Both code words can be sequentially read and interpreted in the predetermined format. The statement concerning a successful or unsuccessful reaction is based on a comparison of the respective code words prior to and after detection. Detection takes place using a reading device, which is preferably constructed from components of the consumer goods industry.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 9 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2004:233309 USPATFULL
TITLE: Proteome epitope tags and **methods** of use thereof in protein modification analysis
INVENTOR(S): Lee, Frank D., Chestnut Hill, MA, UNITED STATES
Meng, Xun, Newton, MA, UNITED STATES
Livingston, David, Barrington, RI, UNITED STATES
PATENT ASSIGNEE(S): engeneOS, Inc., Waltham, MA (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004180380	A1	20040916	
APPLICATION INFO.:	US 2003-712425	A1	20031113	(10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2003-436549, filed on 12 May 2003, PENDING			

	NUMBER	DATE		
PRIORITY INFORMATION:	US 2002-379626P	20020510	(60)	<--
	US 2002-393137P	20020701	(60)	<--
	US 2002-393233P	20020701	(60)	<--
	US 2002-393235P	20020701	(60)	<--

	US 2002-393211P	20020701 (60)	<--
	US 2002-393223P	20020701 (60)	<--
	US 2002-393280P	20020701 (60)	<--
	US 2002-393197P	20020701 (60)	<--
	US 2002-430948P	20021204 (60)	
	US 2002-433319P	20021213 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
NUMBER OF CLAIMS: 125
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 24 Drawing Page(s)
LINE COUNT: 11815
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are **methods** for reliably detecting the presence of proteins, especially proteins with various post-translational modifications (phosphorylation, glycosylation, methylation, acetylation, etc.) in a sample by the use of one or more capture agents that recognize and interact with recognition sequences uniquely characteristic of a set of proteins (Proteome Epitope Tags, or PETs) in the sample. Arrays comprising these capture agents or PETs are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 10 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2004:171886 USPATFULL
TITLE: **Methods** for detection of genetic alterations associated with cancer
INVENTOR(S): Fortina, Paolo, Philadelphia, PA, UNITED STATES
Maris, John M., Moorestown, NJ, UNITED STATES
Gelfand, Craig A., Jackson, NJ, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004132047	A1	20040708	
APPLICATION INFO.:	US 2003-606133	A1	20030625	(10)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2002-391515P	20020625 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DANN, DORFMAN, HERRELL & SKILLMAN, 1601 MARKET STREET, SUITE 2400, PHILADELPHIA, PA, 19103-2307
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 18 Drawing Page(s)
LINE COUNT: 2268
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **Methods** are provided for assessing the presence or absence of genetic alterations in a defined polynucleotide region as a means to diagnose and manage malignant disease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 11 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2004:126981 USPATFULL
TITLE: Manipulation of microparticles in microfluidic systems

INVENTOR(S): Burd Mehta, Tammy, San Jose, CA, UNITED STATES
Kopf-Sill, Anne R., Portola Valley, CA, UNITED STATES
Parce, J. Wallace, Palo Alto, CA, UNITED STATES
Chow, Andrea W., Los Altos, CA, UNITED STATES
Bousse, Luc J., Los Altos, CA, UNITED STATES
Knapp, Michael R., Redwood City, CA, UNITED STATES
Nikiforov, Theo T., San Jose, CA, UNITED STATES
Gallagher, Steve, Palo Alto, CA, UNITED STATES
PATENT ASSIGNEE(S): Caliper Technologies Corp., Mountain View, CA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004096960	A1	20040520
APPLICATION INFO.:	US 2003-606201	A1	20030625 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-510626, filed on 22 Feb 2000, GRANTED, Pat. No. US 6632655

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-121223P	19990223 (60)	<--
	US 1999-127825P	19990405 (60)	<--
	US 1999-128643P	19990409 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: CALIPER LIFE SCIENCES, INC., 605 FAIRCHILD DRIVE, MOUNTAIN VIEW, CA, 94043-2234
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Page(s)
LINE COUNT: 4120
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Arrays of flowable or fixed particle sets are used in microfluidic systems for performing assays and modifying hydrodynamic flow. Also provided are assays utilizing flowable or fixed particle sets within a microfluidic system, as well as kits, apparatus and integrated systems comprising arrays and array members.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 12 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2004:82263 USPATFULL
TITLE: **Methods** of screening agents for activity using teleosts
INVENTOR(S): Serbedzija, George N,, Woburn, MA, UNITED STATES
Semino, Carlos, Cambridge, MA, UNITED STATES
Frost, Deanna M., Seattle, WA, UNITED STATES
PATENT ASSIGNEE(S): Phylonix Pharmaceuticals, Inc., Cambridge, MA, 02139 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004062712	A1	20040401
APPLICATION INFO.:	US 2003-678765	A1	20031002 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-645432, filed on 23 Aug 2000, GRANTED, Pat. No. US 6656449
Continuation-in-part of Ser. No. US 1999-255397, filed on 22 Feb 1999, GRANTED, Pat. No. US 6299858

	NUMBER	DATE

PRIORITY INFORMATION:	US 1998-100950P	19980918 (60)	<--
	US 1998-75783P	19980223 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834		
NUMBER OF CLAIMS:	30		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	19 Drawing Page(s)		
LINE COUNT:	4128		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides **methods** of screening an agent for activity using teleosts. **Methods** of screening an agent for angiogenesis activity, toxic activity and an effect cell death activity in teleosts are provided. The invention further provides high throughput **methods** of screening agents in multi-well plates.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 13 OF 20 USPATFULL on STN

ACCESSION NUMBER:	2004:50877 USPATFULL			
TITLE:	Unique recognition sequences and **methods** of use thereof in protein analysis			
INVENTOR(S):	Lee, Frank D., Chestnut Hill, MA, UNITED STATES Meng, Xun, Newton, MA, UNITED STATES Chan, John W., Acton, MA, UNITED STATES Zhang, Shengsheng, Quincy, MA, UNITED STATES Benkovic, Stephen J., State College, PA, UNITED STATES			
PATENT ASSIGNEE(S):	engeneOS, Inc., Waltham, MA, 02451 (U.S. corporation)			

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004038307	A1	20040226	
APPLICATION INFO.:	US 2003-436549	A1	20030512	(10)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2002-379626P	20020510 (60)	<--
	US 2002-393137P	20020701 (60)	<--
	US 2002-393233P	20020701 (60)	<--
	US 2002-393235P	20020701 (60)	<--
	US 2002-393211P	20020701 (60)	<--
	US 2002-393223P	20020701 (60)	<--
	US 2002-393280P	20020701 (60)	<--
	US 2002-393197P	20020701 (60)	<--
	US 2002-430948P	20021204 (60)	
	US 2002-433319P	20021213 (60)	

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
NUMBER OF CLAIMS:	115
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	4 Drawing Page(s)
LINE COUNT:	5402

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are **methods** for reliably detecting the presence of proteins in a sample by the use of capture agents that recognize and interact with recognition sequences uniquely characteristic of a set of

proteins in the sample. Arrays comprising these capture agents are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 14 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2004:18762 USPATFULL
TITLE: Therapeutics and diagnostics for disorders of erythropoiesis
INVENTOR(S): Brissette, William H., Stonington, CT, UNITED STATES
Neote, Kuldeep S., East Lyme, CT, UNITED STATES
Zagouras, Panayiotis, Old Saybrook, CT, UNITED STATES
Zenke, Martin, Schoenow, GERMANY, FEDERAL REPUBLIC OF
Lemke, Britt, Berlin, GERMANY, FEDERAL REPUBLIC OF
Hacker, Christine, Berlin, GERMANY, FEDERAL REPUBLIC OF

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004014064	A1	20040122	
APPLICATION INFO.:	US 2002-285366	A1	20021031	(10)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2001-335048P	20011031 (60)	<--
	US 2001-335183P	20011102 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FOLEY HOAG, LLP, PATENT GROUP, WORLD TRADE CENTER WEST, 155 SEAPORT BLVD, BOSTON, MA, 02110
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 231 Drawing Page(s)
LINE COUNT: 3854
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides novel panels of molecular targets that regulate erythropoiesis. The novel panels of the invention may be used, for example, in therapeutic intervention, therapeutic agent screening, and in diagnostic **methods** for diseases and/or disorders of erythropoiesis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 15 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2003:314457 USPATFULL
TITLE: **Methods** of screening agents for activity using teleosts
INVENTOR(S): Serbedzija, George, Woburn, MA, United States
Seng, Wen Lin, Westborough, MA, United States
McGrath, Patricia, Cambridge, MA, United States
PATENT ASSIGNEE(S): Phylonix Pharmaceuticals, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6656449	B1	20031202	
APPLICATION INFO.:	US 2000-645432		20000823	(9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-255397, filed on 22 Feb 1999			

	NUMBER	DATE

PRIORITY INFORMATION:	US 1998-100950P	19980918 (60)	<--
	US 1998-75783P	19980223 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Shukla, Ram		
LEGAL REPRESENTATIVE:	Townsend and Townsend and Crew LLP		
NUMBER OF CLAIMS:	31		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	29 Drawing Figure(s); 19 Drawing Page(s)		
LINE COUNT:	4093		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides **methods** of screening an agent for activity using teleosts. **Methods** of screening an agent for angiogenesis activity, toxic activity and an effect cell death activity in teleosts are provided. The invention further provides high throughput **methods** of screening agents in multi-well plates.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 16 OF 20 USPATFULL on STN

ACCESSION NUMBER:	2003:312171 USPATFULL			
TITLE:	Lung cancer therapeutics and diagnostics			
INVENTOR(S):	Beebe, Jean S., Salem, CT, UNITED STATES			
	Coleman, Kevin G., Old Lyme, CT, UNITED STATES			
	Dmitrovsky, Ethan, Hanover, NH, UNITED STATES			
	Turi, Thomas G., Old Saybrook, CT, UNITED STATES			

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003219768	A1	20031127	
APPLICATION INFO.:	US 2002-286989	A1	20021102	(10)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2001-336024P	20011102 (60)	<--
	US 2001-335317P	20011102 (60)	<--
	US 2001-336298P	20011102 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	FOLEY HOAG, LLP, PATENT GROUP, WORLD TRADE CENTER WEST, 155 SEAPORT BLVD, BOSTON, MA, 02110		
NUMBER OF CLAIMS:	142		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	20 Drawing Page(s)		
LINE COUNT:	4409		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides genes that are differentially expressed during neoplasia. These genes and gene products comprise panels for use in screening candidate agents for therapeutic intervention in lung cancers, and for use in therapeutic, prognostic and diagnostic **methods** and compositions. Therapeutic agents are also provided by the invention. Diagnostic compositions include compositions comprising detection agents for detecting one or more genes that have been shown to be up-or down-regulated in pathogenesis of lung cancer. Exemplary detection agents include nucleic acid **probes**, which can be in solution or attached to a solid surface, e.g., in the form of a microarray. The invention also provides computer-readable media comprising values of levels of expression of one or more genes that are modulated in lung cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 17 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2003:244506 USPATFULL
TITLE: Multiplex analysis using membrane-bound sensitizers
INVENTOR(S): Singh, Sharat, San Jose, CA, UNITED STATES
Chan-Hui, Po-Ying, Oakland, CA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003170915	A1	20030911	
	US 6949347	B2	20050927	
APPLICATION INFO.:	US 2003-379965	A1	20030304	(10)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2002-361975P	20020305 (60)	<--
	US 2003-440838P	20030117 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ACLARA BIOSCIENCES, INC., 1288 PEAR AVENUE, MOUNTAIN VIEW, CA, 94043
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 50 Drawing Page(s)
LINE COUNT: 3126
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is directed to **methods** and compositions for determining the presence, absence, and/or amounts of one or more membrane-associated analytes in a sample. In accordance with the invention, binding compounds derivatized with releasable molecular tags specifically bind to selected membrane-associated analytes, after which the molecular tags are released upon activation of cleavage moieties, or sensitizers, anchored in the same membrane as the membrane-associated analytes. The released molecular tags are then identified by their distinct separation and detection characteristics.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 18 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2003:146195 USPATFULL
TITLE: Single target counting assays using semiconductor nanocrystals
INVENTOR(S): Empedocles, Stephen A., Mountain View, CA, UNITED STATES
Watson, Andrew R., Belmont, CA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003099940	A1	20030529	
APPLICATION INFO.:	US 2001-784866	A1	20010215	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2000-182844P	20000216 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Jeffry S. Mann, Esq., Townsend and Townsend and Crew LLP, 8th Floor, Two Embarcadero Center, San Francisco,

CA, 94111-3834
NUMBER OF CLAIMS: 39
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 2710
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides assays that allow for the detection of a single copy of a target of interest. The target species is either directly or indirectly labeled with a semiconductor nanocrytal, "quantum dot." The bright and tunable **fluorescence** of the quantum dot is readily detected using **methods** described herein. Also provided are assays that are based on the colocalization of two or more differently colored quantum dots on a single target species, which provides superbly sensitive assays in which the decrease in assay sensitivity caused by non-specific binding of assay mixture components to the assay substrate is minimized. The assays are of use to detect target species including, but are not limited to, nucleic acids, polypeptides, small organic bioactive agents (e.g., drugs, agents of war, herbicides, pesticides, etc.) and organisms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 19 OF 20 USPATFULL on STN
ACCESSION NUMBER: 2002:112538 USPATFULL
TITLE: **Method** and system for rapid biomolecular recognition of amino acids and protein sequencing
INVENTOR(S): Shipwash, Edward, San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002058273	A1	20020516	<--
	US 6846638	B2	20050125	
APPLICATION INFO.:	US 2001-927424	A1	20010809 (9)	

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2000-224551P	20000810 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 102
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 30 Drawing Page(s)
LINE COUNT: 5577
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **Methods**, compositions, kits, and apparatus are provided wherein the aminoacyl-tRNA synthetase system is used to analyze amino acids. The **method** allows very small devices for quantitative or semi-quantitative analysis of the amino acids in samples or in sequential or complete proteolytic digestions. The **methods** can be readily applied to the detection and/or quantitation of one or more primary amino acids by using cognate aminoacyl-tRNA synthetase and cognate tRNA. The basis of the **method** is that each of the 20 synthetases and/or a tRNA specific for a different amino acid is separated spatially or differentially labeled. The reactions catalyzed by all 20 synthetases may be monitored simultaneously, or nearly simultaneously, or in parallel. Each separately positioned synthetase or tRNA will signal its cognate amino acid. The synthetase reactions can be monitored using continuous spectroscopic assays. Alternatively, since

elongation factor Tu:GTP (EF-Tu:GTP) specifically binds all AA-tRNAs, the aminoacylation reactions catalyzed by the synthetases can be monitored using ligand assays. Microarrays and microsensors for amino acid analysis are provided. Additionally, amino acid analysis devices are integrated with protease digestions to produce miniaturized enzymatic sequenators capable of generating either N- or C-terminal sequence and composition data for a protein or peptide. The possibility of parallel processing of many samples in an automated manner is discussed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L24 ANSWER 20 OF 20 USPATFULL on STN

ACCESSION NUMBER:	2002:48266 USPATFULL			
TITLE:	Single target counting assays using semiconductor nanocrystals			
INVENTOR(S):	Empedocles, Stephen Alexander, Mountain View, CA, UNITED STATES Watson, Andrew R., Belmont, CA, UNITED STATES Phillips, Vince, Sunnyvale, CA, UNITED STATES Wong, Edith, Danville, CA, UNITED STATES			
PATENT ASSIGNEE(S):	Quantum Dot Corporation, Hayward, CA, UNITED STATES, 94545 (U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002028457	A1	20020307	<--
APPLICATION INFO.:	US 2001-882193	A1	20010613 (9)	
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2001-784866, filed on 15 Feb 2001, PENDING			
	NUMBER		DATE	
PRIORITY INFORMATION:	US 2000-182844P		20000216 (60)	<--
	US 2000-211054P		20000613 (60)	<--
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834			
NUMBER OF CLAIMS:	18			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	15 Drawing Page(s)			
LINE COUNT:	2844			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides assays that allow for the detection of a single copy of a target of interest. The target species is either directly or indirectly labeled with a semiconductor nanocrytal, "quantum dot." The bright and tunable **fluorescence** of the quantum dot is readily detected using **methods** described herein. Also provided are assays that are based on the colocalization of two or more differently colored quantum dots on a single target species, which provides superbly sensitive assays in which the decrease in assay sensitivity caused by non-specific binding of assay mixture components to the assay substrate is minimized. The assays are of use to detect target species including, but are not limited to, nucleic acids, polypeptides, small organic bioactive agents (e.g., drugs, agents of war, herbicides, pesticides, etc.) and organisms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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=> d his ful
     (FILE 'HOME' ENTERED AT 14:36:05 ON 11 AUG 2006)

     FILE 'HCAPLUS' ENTERED AT 14:37:38 ON 11 AUG 2006
                E MCCORMICK MARK/AU
L1            28 SEA ABB=ON  "MCCORMICK MARK"/AU
                E BARRETT GARY/AU
L2            14 SEA ABB=ON  "BARRETT GARY"/AU
                E GREEN ROLAND/AU
L3            23 SEA ABB=ON  "GREEN ROLAND"/AU
                E SINGH JAZ/AU
L4             3 SEA ABB=ON  "SINGH JAZ"/AU
L5             1 SEA ABB=ON  L1 AND L2 AND L3 AND L4
L6               ANALYZE L5 1-1 CT :       15 TERMS

     FILE 'HCAPLUS' ENTERED AT 14:46:24 ON 11 AUG 2006
L7         31379 SEA ABB=ON  MICROARRAY TECHNOLOGY+ALL
L8             7 SEA ABB=ON  L7 AND ?SUBARRAY?
L9           242 SEA ABB=ON  L7 AND (?OPTICAL?(W)?DETECT? OR ?MACHINE?(W)?READ?)
L10          248 SEA ABB=ON  L8 OR L9
L11           75 SEA ABB=ON  L10 AND (?PROBE? OR ?HAPTEN?)
L12           49 SEA ABB=ON  L11 AND (?FLUORESC? OR ?ILLUMIN?)
L13            1 SEA ABB=ON  L12 AND ?VISUAL?(W)?ALIGN?
L14           35 SEA ABB=ON  L12 AND ?METHOD?
L15           35 SEA ABB=ON  L13 OR L14

     FILE 'MEDLINE, BIOSIS, EMBASE, JAPIO, JICST-EPLUS' ENTERED AT 14:48:47 ON
     11 AUG 2006
L16            2 SEA ABB=ON  L15
L17            1 DUP REMOV L16 (1 DUPLICATE REMOVED)

     FILE 'HCAPLUS' ENTERED AT 14:50:59 ON 11 AUG 2006
L18           26 SEA ABB=ON  L15 AND (PRD<20020930 OR PD<20020930)

     FILE 'USPATFULL' ENTERED AT 14:51:14 ON 11 AUG 2006
L19           95 SEA ABB=ON  L15 AND (PRD<20020930 OR PD<20020930)
L20            3 SEA ABB=ON  L19 AND ?VISUAL?(3A)?ALIGN?

     FILE 'HCAPLUS' ENTERED AT 14:53:40 ON 11 AUG 2006
L21            0 SEA ABB=ON  L18 AND ?BIOTINYLAT?

     FILE 'USPATFULL' ENTERED AT 14:53:58 ON 11 AUG 2006
L22           44 SEA ABB=ON  L19 AND ?BIOTINYLAT?
L23           46 SEA ABB=ON  L20 OR L22
L24           20 SEA ABB=ON  L23 AND ?LIGHT?(W)?SCATTER?

     FILE 'HCAPLUS' ENTERED AT 14:55:33 ON 11 AUG 2006
L25            0 SEA ABB=ON  L18 AND ?BIOTINYLAT?

     FILE HOME

     FILE HCAPLUS

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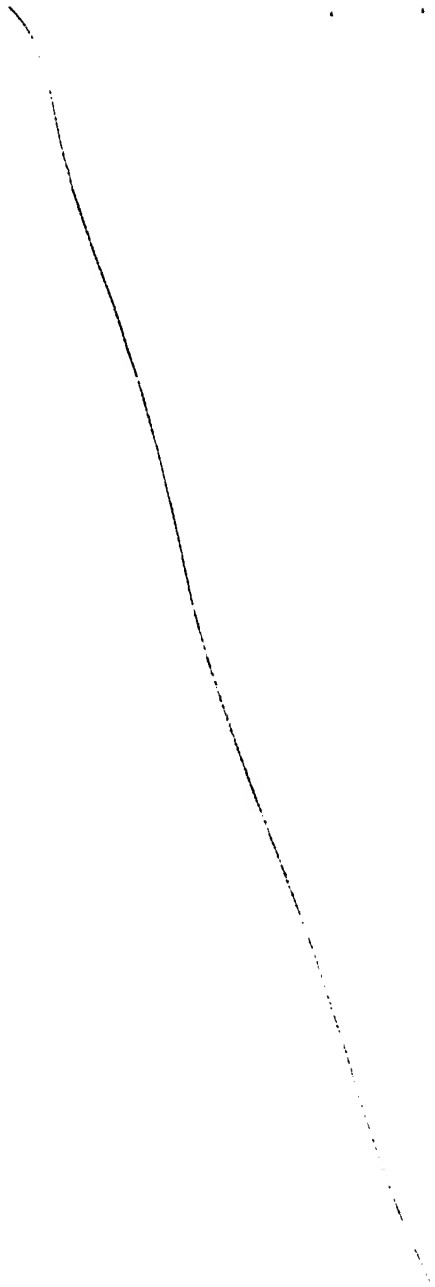
1 cit from dbs

26 cits from CA Plus

20 cits from US Patfull



FILE COVERS 1907 - 11 Aug 2006 VOL 145 ISS 8
FILE LAST UPDATED: 10 Aug 2006 (20060810/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE MEDLINE
FILE LAST UPDATED: 10 Aug 2006 (20060810/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 9 August 2006 (20060809/ED)

FILE EMBASE
FILE COVERS 1974 TO 11 Aug 2006 (20060811/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE JAPIO
FILE LAST UPDATED: 3 APR 2006 <20060403/UP>
FILE COVERS APRIL 1973 TO DECEMBER 22, 2005

>>> GRAPHIC IMAGES AVAILABLE <<<

>>> NEW IPC8 DATA AND FUNCTIONALITY NOT YET AVAILABLE IN THIS FILE.

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USE IPC7 FORMAT FOR SEARCHING THE IPC. WATCH THIS SPACE FOR FURTHER DEVELOPMENTS AND SEE OUR NEWS SECTION FOR FURTHER INFORMATION ABOUT THE IPC REFORM <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 7 AUG 2006 (20060807/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 10 Aug 2006 (20060810/PD)
FILE LAST UPDATED: 10 Aug 2006 (20060810/ED)
HIGHEST GRANTED PATENT NUMBER: US7089595
HIGHEST APPLICATION PUBLICATION NUMBER: US2006179536
CA INDEXING IS CURRENT THROUGH 8 Aug 2006 (20060808/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 10 Aug 2006 (20060810/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2006

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=> d ibib abs ind l5 1-1

L5 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:473232 HCAPLUS
DOCUMENT NUMBER: 141:20082
TITLE: Microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound
INVENTOR(S): **McCormick, Mark; Barrett, Gary; Green, Roland; Singh, Jaz**
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004110212	A1	20040610	US 2003-675329		20030930
PRIORITY APPLN. INFO.:			US 2002-415119P	P	20020930

AB The present invention provides a method for the in situ synthesis of haptenylated border regions that provide a visual marker for aligning microarrays, and their development by a variety of either chemical or enzymic methods. The invention also includes microarrays containing the visible borders. The visible borders allow for simple, direct determination of the grid location when pipetting manually, and provide an effective light-scattering marker for determination of grid location by robotic-optical methods. The visible borders are provided by photopatterning a haptenylated compound onto the microarray in the interstitial regions surrounding the grid elements then rendering visible the haptenylated borders via the use of fluorescent, reflective, refractive or highly contrasting compds. The compds. may be deposited via one of the methods common to microarray detection and Western blot anal. wherein a binding moiety (e.g. streptavidin) specific to the hapten (e.g. biotin) is supplied in a form coupled to a fluorescent or enzymic reporter mol. The reporter mol. may include catalytic antibodies, fluorophore-labeled microparticles, alkaline phosphatases, and horseradish peroxidases. The border regions are synthesized by photopatterning the haptenylated phosphoramidite in the region between the grid elements either before, during or at the conclusion of microarray synthesis. In one embodiment, the visible border is synthesized in situ by photopatterning a haptenylated compound, such as biotin phosphoramidite, in the border region and then coupling the biotinylated compound to a secondary compound, such as streptavidin and a reporter mol., to render the border visible. A suitable embodiment of the invention is where the entire array is coupled with a NPPOC [2-(2-nitrophenyl)propoxycarbonyl] to provide a patternable first layer. The subarrays are synthesized and the areas to be used for visible borders are reserved (protected from light). The last step in synthesis is the photodeprotection of the areas where visible borders are desired and coupling of biotin phosphoramidite. This all occurs on the MAS instrument so the borders can be placed precisely where desired (i.e., there is flexibility in the placement of the alignment mark within the array). The array is removed from the instrument and deprotected (since the biotin and the array are not functional until deprotected.). The biotin borders are then rendered visible or detectable through streptavidin conjugated to a fluorophore, colloidal gold, or other detectable compound

IC ICM B05D003-00
ICS C12Q001-68; G01N033-53; C12M001-34
INCL 435006000; 435007500; 435287200; 427002110
CC 9-1 (Biochemical Methods)
ST microarray vision alignment mark haptenylated border photopatterning
IT Protective groups
(NPPOC (2-(2-nitrophenyl)propoxycarbonyl); microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Antibodies and Immunoglobulins
RL: NUU (Other use, unclassified); USES (Uses)
(catalytic, reporter conjugated to streptavidin; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Haptens
RL: NUU (Other use, unclassified); USES (Uses)
(conjugates, with phosphoramidites; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Robotics
(determination of grid location by; microarrays with visual alignment marks, in
situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Microparticles
(fluorophore-labeled, reporter conjugated to streptavidin; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Light scattering
(marker; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Colloids
(metal suspension, reporter conjugated to streptavidin; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Biotinylation
DNA microarray technology
Microarray technology
Protein microarray technology
(microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Fluorescent indicators
(microparticles labeled with, reporter conjugated to streptavidin; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Dyes
(reporter conjugated to streptavidin; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Semiconductor lasers
(scanning, to detect the visible or machine readable alignment mark; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT Optical detectors
(to detect the visible or machine readable alignment mark; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)
IT 51-28-5, DNP, uses 58-85-5, Biotin
RL: NUU (Other use, unclassified); USES (Uses)
(hapten; microarrays with visual alignment marks, in situ synthesis of

haptenylated border regions by photopatterning a haptenylated compound)

IT 9003-99-0, Peroxidase
RL: NUU (Other use, unclassified); USES (Uses)
(horseradish, reporter conjugated to streptavidin; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)

IT 9013-20-1D, Streptavidin, conjugated to a reporter mol., as illuminating compound for alignment mark
RL: NUU (Other use, unclassified); USES (Uses)
(microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)

IT 9001-78-9, Alkaline phosphatase
RL: NUU (Other use, unclassified); USES (Uses)
(reporter conjugated to streptavidin; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)

IT 135137-87-0
RL: NUU (Other use, unclassified); USES (Uses)
(used to deliver a hapten onto an array; microarrays with visual alignment marks, in situ synthesis of haptenylated border regions by photopatterning a haptenylated compound)